



The State of New Hampshire
Department of Environmental Services



Michael P. Nolin
Commissioner

March 24, 2004
Letter of Deficiency
DSP#04-020

Mr. Bill Dickerman
Administrator
Hampshire Country School
122 Hampshire Road
Rindge, NH 03461

RE: Stump Pond Dam #203.41, Rindge

Dear Mr. Dickerman:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on November 5, 2003. During this visual inspection and/or file review, the following deficiencies were observed:

1. The brush and tree growth along the entire embankment both upstream and downstream crest appeared to be maintained on an annual basis, though some regrowth along the entire embankment both on the right and left side of the concrete overflow spillway has occurred;
2. Tree/brush growth within 15 feet of the downstream toe of the south embankment did not appear to be maintained on an annual basis along the south/right downstream embankment;
3. Previously felled large trees and brush were left on the ground within 15 feet of the toe of the dam;
4. There was a rodent/erosion hole immediately upstream of the downstream stone retaining wall approximately 150 feet from the far right abutment;
5. There was substantial seepage at the toe of the eastern/left embankment, in the middle of the embankment, that appeared to be similar to past conditions;
6. The crack in the left concrete training wall has not been repaired as requested in a previous letter dated July 24, 2000 and an additional crack was observed in the right concrete cutoff wall;
7. It appeared that further erosion of material on the downstream face of both the right and left concrete cutoff wall at the primary outlet has taken place since the last inspection, and large riprap has not been placed as requested in a previous letter dated July 24, 2000;

8. The natural overflow spillway on the eastern edge of the impoundment was not observed. However, in the previous report/letter dated July 24, 2000 it was indicated that all trees and brush for at least 50 feet from the high water line be removed from the natural channel;

Outstanding items of deficiency as noted in the August 19, 1997 LOD:

9. Investigate and repair, as necessary, the leak at the downstream toe of the southern dike, approximately 200 feet from the far right side of the dike. **The weir placed at the south embankment was not observed on this date as it could not be located and it was unclear if continual monitoring is being performed as no log was presented at the time of the inspection; and**
10. Restore dislodged stones from the downstream stone retaining wall of the southern dike. **The downstream stone face of the south/right embankment had further deteriorated in several places with significant leaning of the wall. In a follow-up letter dated July 24, 2000 it was indicated by DES that 6" minimum riprap in a 2.5:1 slope could be placed along the downstream face of the leaning stonewall. It was also indicated that if riprap was not placed continual monitoring of the wall was to be conducted. It is unclear if monitoring of the wall has been conducted as no monitoring devices were observed.**

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

July 1, 2004:

1. Develop a plan to repair the downstream stonewall of the south dike and submit the plan to our office for review. The final repair of the stonewall to be completed by September 1, 2005;
2. Review and amend the attached O&M plan as necessary (see attached). If no changes are necessary please indicate so in a letter addressed to the Water Division at the above address;

October 1, 2004:

3. Remove tree/brush growth within 15 feet of the downstream toe of the south embankment as it did not appear to be maintained on an annual basis;
4. Remove the previously felled trees and brush from along the south/right downstream embankment to a location, which is at least 20 feet from the toe of the dam and does not interfere with flow exiting the dam, including seepage;
5. Fill with suitable embankment fill and compact the rodent/erosion hole immediately upstream of the downstream stone retaining wall approximately 150 feet from the far right abutment;
6. Construct a v-notch weir to measure seepage in the middle of the eastern embankment and reconfigure the v-notch weir 100 feet from the right abutment of the south dike to record seepage flow on a biweekly schedule. By October 1, 2004 begin submitting reports to our office

Letter of Deficiency
Dam#203.41/DSP#04-020
March 24, 2004
pg. 3

indicating the flow through each weir. The report should include the date of the measurement, weather conditions, impoundment elevation, and the time to each measurement;

7. Repair the cracks in the left concrete training wall and in the right concrete cutoff wall prior to placement of large sized angular riprap along the downstream face and abutments to the concrete overflow spillway; and
8. Remove all trees and brush for at least 50 feet from the high water line in the natural spillway outlet channel.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the bottom of the cover page.

Sincerely

COPY

Dale F. Guinn, P.E.
Dam Safety Engineer

Attachments Copy of O&M on file, DB8, DB13, Sketch Illustrating Deficiencies

cc: Gretchen Rule✓

Town of Rindge

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